Gulf Cooperation Council

EDICT OF GOVERNMENT

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GSO 2113 (2011) (English): MOTOR VEHICLES LATERAL PROTECTION OF TRUCK AND TRAILER AND ITS METHODS OF TEST (Draft Standard)

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هيئة التقييس لدول مجلس التعاون لدول الخليج العربية
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MOTOR VEHICLES
LATERAL PROTECTION OF TRUCK AND TRAILER AND ITS METHODS OF TEST

إعداد

اللجنة الفنية الفرعية الخليجية لقطاع مواصفات المركبات والإطارات

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وقد قامت هيئة التقييس لدول مجلس التعاون لدول الخليج العربية ضمن برنامج عمل اللجنة الفنية رقم2-1 " اللجنة الفنية الخليجية الفرعية لقطاع مواصفات المركبات والإطارات " بإعداد المواصفة القياسية الخليجية رقم " GSO2/DS/ECE 73: 2009 " السيارات – الحماية الجانبية للشاحنات والمقطورات وطرق اختبارها " من قبل سلطنة عمان وقد تم إعداد المشروع بعد استعراض المواصفات القياسية العربية والأجنبية والدولية والمؤلفات المرجعية ذات الصلة.

وقد اعتمدت هذه المواصفة كمواصفة قياسية خليجية في اجتماع مجلس إدارة الهيئة رقم ( )، الذي عقد بتاريخ / / هـ ، الموافق / / م.

Foreword

Standardization Organization for G CC (GSO) is a regional Organization which consists of the National Standa rds Bodies of GCC mem ber States. One of GSO main functions is to issue Gulf Standards /Technical regulation through specialized technical committees (TCs).

GSO through the technical pr ogram of committee TC No. 2-1 " The Gulf technical Subcommittee for vehicles and tyres standards " has prepared this Standard . The Draft Standard has been prepared by sultanate of Oman.

The draft Standard has been pr epared based on relevant ADMO, International and National foreign Standards and references.

This standard has been approved as Gulf Standard by GSO Board of Directors in its meeting No..../.... …….held on / / / H , / / G

MOTOR VEHICLES
LATERAL PROTECTION OF TRUCK AND TRAILER AND ITS METHODS OF TEST

1- SCOPE AND FIELD OF APPLICATION

This regulation is con cerned with the requ irements for the late ral protection (side guards) of trucks and trailers having maxim um mass exceeding 3.5 tones used for the carriage of goods.

This regulation does not apply to tractors for sem i trailers and vehicles designed and constructed for special purposes where it is not possible for practical reasons to fit such lateral protection

2- COMPLEMENTARY REFERENCES

2.1 GSO 159/.1993.... “Motor Vehicles - Weights and Dimensions”.

2.2 GSO 48/1984..... “Motor Vehicles - Conformity Certificates”.

3- DEFINITIONS

3.1 Motor vehicle: A vehicle, excluding motor cycles or trailers, operated by means of a motor without dependence on rails, cables or similar guides.

3.2 Truck: A motor vehicle intended fo r carrying goods. It m ay also tows a trailer.

3.3 Maximum weight: The weight stated by the vehicle m anufacturer to be technically permissible.

3.4 Approval of a vehicle: The approval of a complete vehicle type with regard to its lateral protection;

3.5 Vehicle type : A category of vehicles which do not differ with respect to the essential points such as the width of the rear axle, the o verall width, the dimensions, the shape and the m aterials of the whole side of the vehicle (including the cab if fitted), and the characteristics of the

suspension in so far as they have a bearing on the techn ical requirements specified in this Regulation.

3.6 Maximum mass : The mass stated by the vehicle m anufacturer to be technically permissible (this m ass may be higher than the "perm issible maximum mass" laid down by the national administration);

3.7 Unladen mass: The weight of the vehicle in running order, unoccupied and unladen, but com plete with fuel, coolant, lubricant, tools and spare wheel, if supplied by the vehicle manufacturer as standard equipment;

3.8 Unprotected road users: The pedestrian s, cyclists or m otor cyclists using the road in such a way that they ar e liable to fall under the sides of the vehicle and be caught under the wheels.

4- REQUIREMENTS

The following shall be met.

4.1 General

4.1.1 All vehicles carrying goods, includi ng tankers, m obile cranes, m obile workshops, trailers and sem i-trailers shall be constructed and equipped in such a way as to offer, throughout their length, at both sides effective protection to unprotected road users ag ainst the risk of falling under the sides of the vehicle and being caught under the wheels. This shall be complied by providing one of the following:

4.1.1.1 The vehicle is equipped with a sp ecial lateral protective device (side guards) according to the technical requirements specified in item 4.2.or

4.1.1.2 If the vehicle is so designed and/or equipped at the side that by virtue of their shape and characteri stics, its com ponent parts can be incorporated and/or regarded as replacing the lateral protective device and comply with the requirements specified in item 4.2.

4.2 Technical

4.2.1 The side guard shall not increase the overall width of the vehicle.

4.2.2 The main part of side guard's ou ter surface sh all not be more than 1 20 mm in board from the outer most plane of the vehicle.

4.2.3 The side guards forward end m ay be turned inwards in accordance with the requirements mentioned below.

4.2.4 The side guard's rearward end shall not be more than 30 mm in board from the outermost edge of the rear tyres over at least the rearmost 250 mm.

4.2.5 The outer surface of the guard shall be smooth, and so far as possible continuous from front to the rear.

4.2.6 Adjacent parts may overlap, provided that the overlapping edge faces rearwards or downwards or a gap of not more than 25mm measured longitudinally may be left, provided that the rearward part does not protrude outboard of the forward part.

4.2.7 Domed heads of bolts or rivets may protrude beyond the surface to a distance not exceeding 10 mm and other parts may protrude to the same extent provided that they are smooth and rounded.

4.2.8 The external edges and corners shall be rounded with a radius not less than 2.5 mm.

4.2.9 The device may consist of a continuous flat surface or of one or more horizontal rails or a combination of surface and rails.

4.2.10 The rails used shall be not more than 300 mm apart.

4.2.11 The rails used shall be not less than 50 mm high for vehicles having maximum mass less than 12 tons and trailers having maximum mass less than 10 tons.

4.2.12 The rails used shall be not less than 100 mm high for vehicles having maximum mass more than 12 tons and trailers having maximum mass more than 10 tons.

4.2.13 The forward edge of the side guard shall be constructed and positioned in such a way that it will comply with the following:

4.2.13.1 On a motor vehicle: It shall not be more than 300 mm to the rear of the vertical plane perpendicular to the longitudinal plane of the vehicle and tangential to the outer surface of the tyre on the wheel immediately forward of the guard.

4.2.13.2 On a drawbar trailer: It shall not be more than 500 mm to the rear of the vertical plane perpendicular to the longitudinal plane of the trailer and tangential to the outer surface of the tyre on the wheel immediately forward of the guard.

4.2.13.3 On a semi-trailer: It shall not be more than 250 mm to the rear of the transverse median plane of the support legs, if support legs are fitted, but in any case the distance from the front edge to the transverse plane

passing through the centre of the kingpin in its rearm ost position may not exceed 2.7m. Construction:

4.2.13.4 When the forward edge of the guard lies in an open space, the edge shall consist of a continuous vertical member extending the whole height of the guard, the outer and forward faces of this vertical member shall measure at least 50 mm rearwards and be turn ed 100 mm inwards in the case of trucks having maximum mass of 3.5 t ons to 12 tons and trailers having maximum mass of 3.5 tons to 10 tons.

4.2.13.5 The outer and forward faces of this vertical member in item 4.2.12.4 shall measure at least 100 mm rearwards and be turned 100 mm inwards in the case of trucks having m aximum mass exceeding 12 tons and trailers having maximum mass exceeding 10 tons.

4.2.13.6 On a motor vehicle if the forward edge of the guard which is 300 mm dimension falls within the cab, the guard shall be so constr ucted that the gap between its forward edge and the cab panels does not exceed 100 mm and it shall be turned in through an angle not exceeding 45^{o}.

4.2.13.7 On a motor vehicle if the forward edge of the guard which is 300 mm dimensions falls behind the cab and the side guard is extended forward to within 100 mm of the cab, then the pr ovisions of the previous item shall be met.

4.2.14 The rearward edge of t he side gua rd shall not be m ore than 300 mm forward of the vertical plane perpendicular to the longitudinal plane of the vehicle and tangential to the outer surface of the tyre on the wheel immediately to the rear.

4.2.15 The lower edge of the side guard shall be not m ore than 550 mm above the ground at any point.

4.2.16 The upper edge of the side guard sh all not be more than 350 mm below that part of the structure of the vehicle, cut or contacted by a vertical plane tangential to the outer surface of the tyres, excluding any bulging close to the ground, except in the following cases.

4.2.16.1 Where the plane in the item 4.2.16 does not cut the structure of the vehicle, then the upper edge shall be level with the surface of the load-carrying platform, or 950 mm from the ground whichever is the less.

4.2.16.2 Where the plane in item 4.2.16 cuts the structure of the vehicle at a level more than 1.3 m above the ground, then the upper edge of the side guard shall not be less than 950 mm above the ground.

4.2.16.3 On a vehicle specially designed and c onstructed, and not m erely adapted, for the carriage of a container or de mountable body, the upper edge of the

guard shall be determ ined in accordance with any one of the items (4.2.16.1 and 4.2.16.2) mentioned above.

4.2.17 Components permanently fixed to the vehicle, e.g. spare wheels, batterybox, air tanks, fuel tanks, lamps, reflectors and tool boxes m ay be incorporated in the gu ard, provided that they m eet the dim ensional requirements of this Regulation. The requirements of item s from 4.2.5 to 4.2.8 shall generally apply as regards gaps between protective devices and permanently fixed components.

4.3 Design

4.3.1 The side guards shall be rigid and shall be mounted securely without any vibration in normal use of the vehicle.

4.3.2 The side guard shall be made of metal or any other suitable material.

4.4 The side guard shall not be used for the attachm ent of brake, air or hydraulic pipes.

4.5 Strength

The guard shall be capable of with standing a horizontal static force of 1 Kn applied perpendicularly to any part of its external surface by the centre of a ram the face of which is circular and flat and th e deflection of the guard under load is not more than:

4.5.1 30 mm over the rearmost 250 mm of the guard.

4.5.2 150 mm over the remainder of the guard.

5- LABELLING AND MARKING

5.1 Each side guard shall be legibly an d durably marked or labeled with the following information in Arabic and/or English.

5.1.1 Manufacturer's name and address.

5.1.2 Vehicle type for which the side guard is designed.

5.1.3 Brief description of the side gua rd e.g. dim ensions and constituent materials.

5.1.4 Maximum mass.

6- TESTING

6.1 Sampling

Two large side guard for truck and tr ailer shall be supplied and subjected to the required tests prescribed in this standard.

6.2 Measuring instruments

6.2.1 Dimensions measuring instrument:

The instruments used shall permit measurement to an accuracy of ± 1 mm.

6.2.2 Force measuring instruments:

The instruments used shall permit measurement to an accuracy of ± 5% of the range.

6.3 Tests

The following tests sha ll be car ried out on the side gua rd withdrawn in accordance with item 6.1.

6.3.1 Visual inspection

The side guard shall be visually in spected to ch eck for damage, cracks, sharp edges, sharp corners, any other apparent defects in the manufacture.

6.3.2 Dimensions measurement

6.3.2.1 Apparatus

Suitable measuring instruments shall be used for checking the dim ensions of the side guard.

6.3.2.2 Preparation for the test

- The vehicle shall be positioned on a horizontal and flat surface.
- The steered wheels shall be in a straight ahead position.
- The vehicle shall be unladen.
- Semi-trailers shall b e positioned on their suppo rts in an es sentially horizontally manner.

6.3.2.3 Procedure

The measurements shall be m ade on the s ide guard and th e compliance with item 4 shall be checked.

6.3.3 Strength test

6.3.3.1 Apparatus

The apparatus shall consists of a ram the face of which is circular and flat with a diameter of (220 ± 10) mm.

6.3.3.2 Preparation for the test

The vehicle shall be positioned for the tests as explained in item 6.3.2.2.

6.3.3.3 Procedure

- The vehicle shall be positioned on a horizontal flat surface.
- The circular ram of dia meter (220 ± 10) mm shall be positioned at a point at 250 mm from the rear.
- A horizontal static force of 1 Kn shall be applied at this point.
- The deflection of the guard from the original fixed position shall be measured.
- The test shall be repeated at several points along the side guard and the deflection shall be measured.

7- CRITERIA OF TECHNICAL CONFORMITY

7.1 The criteria of technical conformity shall be in accordance with the Gulf Standard G.S. 48 "Motor Vehicles - Conformity Certificates",

7.2 The side guard shall be considered complying with all the requirements of this standard when the withdrawn sample from the consignment or the supplied sample passes the tests.

7.3 In case one or more side guard in the sample fails to pass the test, a second sample double the number of units as the first one shall be withdrawn from the same consignment or the supplied sample and subjected to the tests.

The side guard shall be considered complying with requirements of this standard when all the units of the second sample pass the tests, otherwise the side guard shall be considered non-complying.